



1
DESCRIPTION

APPROVED FOR ENTRY
TT. JULY 6, 2005

Air Supply Device Having Sealant Attached To Both Sides Of
Rolling Elements Of Bearing Supporting An Orbital Scroll

5

Technical Field

The present invention relates to an air supply device that is used as, for example, a supercharger for an engine or an air compressor for a fuel cell.

10 Background Art

In fluid machinery, sliding portions are generally lubricated with oil in order to prevent seizing or abnormal wear or abrasion. Accordingly, a fluid discharged from the fluid machinery is somewhat mixed with the oil, and it is extremely difficult to remove the oil from the fluid. In view of this, use of bearings such as grease-filled ball bearings for the sliding portions has been suggested to perform lubrication only within the bearings for supply of a clean fluid (see, for example, Patent Document 1).

• Patent Document 1: Japanese Laid-Open Utility Model Publication No. 62-59788 (pages 9 and 10, Fig. 1)

20 Use of grease-filled bearings is not limited to fluid machinery, and they are generally used in various fields including the field of automotive vehicles, the field of medical machinery and the like. Such grease-filled bearings have two sealing materials disposed on respective sides thereof that prevent grease from being mixed with dust or moisture in an atmosphere. If a grease-filled bearing merely supports a rotational motion, grease filled inside would never leak outside the bearing.

However, in a case of a scroll fluid machine in which an orbital scroll undergoes an orbiting motion relative to a stationary scroll to compress a fluid, the